

# Catalytic Converters Maintain Air Quality in Mines



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***Airflow Catalyst Systems Inc.  
Rochester, New York***

## **NASA Technology**

- ◆ Carbon dioxide (CO<sub>2</sub>) lasers were used to detect wind shears, which can wreak havoc on airplanes and cause crashes
- ◆ NASA developed a tin oxide-based catalyst to rid the laser of carbon monoxide (CO) byproducts and conserve CO<sub>2</sub>



## **Technology Transfer**

- ◆ Airflow Catalyst Systems licensed the NASA technology and adapted it for use as a catalytic converter for exhaust systems
- ◆ The company found a niche in providing catalytic converters for underground diesel mining equipment, which produce harmful emissions that are exacerbated by the enclosed environment

## **Benefits**

- ◆ The product neutralizes CO, hydrocarbons, oxides of nitrogen, and particulate matter
- ◆ Unlike mechanical filters, which must be changed daily, the converters do not require frequent maintenance
- ◆ Converters are projected to last for 7,000 hours